

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application:

1-28 (Canceled)

29. A device for the optical display of n switching states of a sensor, the device comprising:
- a plurality of different coloured lighting devices for the optical transmission of information, each lighting device having at least one lighting element; and
 - a sensor casing that includes a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk in the case of simultaneously active lighting elements;
- wherein optical interfaces subdivide the transparent casing part into segments in which the lighting elements are received; and
- wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range.
30. The device of claim 29, wherein at least one lighting device includes a plurality of lighting elements selected from the group consisting of light bulbs and LEDs.
31. The device of claim 30, wherein at least one lighting device includes a plurality of lighting elements that are placed on opposing sides of the transparent casing part.

32. The device of claim 29, wherein the lighting devices are placed on a printed circuit board and are arranged in at least one of a row or in parallel to one another in order to illuminate a segment.

33. The device of claim 32, wherein the printed circuit board is slid into the transparent casing part.

34. The device of claim 29, wherein the transparent casing part is constructed for one of a terminal or a central installation on a casing selected from the group of casings consisting of cylindrical, round and polygonal casings.

35. The device of claim 29, wherein the lighting devices are visible to the user from any azimuth direction in a polar angle range between approximately 20° and approximately 180° .

36. The device of claim 29, wherein the optical interfaces are formed by at least one interface selected from the group consisting of printed circuit boards, planar shaped separations, insert parts and cables.

37. The device of claim 29, wherein an outer face of the transparent casing part is at least partly roughened to increase light scattering.

38. The device of claim 29, wherein the transparent casing part is at least partly coloured to avoid viewing inside the sensor.

39. The device of claim 29, wherein the transparent casing part is constructed as part of a joystick.

40. The device of claim 29, wherein light scattering pigments are input in a surface-distributed manner, at least zonally, into a material of the transparent casing part to increase light scattering.
41. The device of claim 29, wherein an interior of the transparent casing part is at least partly silvered to improve leading out of the light.
42. The device of claim 29, wherein the light emission angle for a segment is limited by cavities introduced in a clearly defined manner into the transparent casing part.
43. The device of claim 29, wherein the transparent casing part includes a plurality of cable bushings with an insertion bevel as a cable insertion which is constructed as part of an optical interface.
44. The device of claim 29, wherein the transparent casing part is constructed as one of a tubular plug insert or a compact end termination.
45. The device of claim 29, wherein the sensor casing is forked.
46. The device of claim 45, wherein the transparent casing part is included on at least one fork end of the sensor casing.
47. The device of claim 29, wherein the transparent casing part forms the sensor casing.

48. The device of claim 29, wherein at least one additional optical interface is formed into the sensor by casting resin.

49. The device of claim 29, wherein the segments are filled with at least one of a sealing or a casting compound.

50. The device of claim 29, wherein at least one of the segments includes a plurality of differently coloured lighting devices.

51. The device of claim 29, wherein at least one of the segments is constructed as an optical interface for an external computer means.

52. The device of claim 29, wherein the transparent casing part includes at least one optical bridge that, to a limited extent, overcouple the light for the clearly defined light transmission from one segment into another segment.

53. The device of claim 29, wherein the sensor is constructed as a sensor selected from the group consisting of inductive, optical, capacitive, ultrasonic, microwave, temperature, fill level, infrared, ultraviolet, pressure, flow sensors, position sensors, proximity switches and electrical switching devices.

54. A device for the optical display of n switching states of a sensor, the device comprising:

a plurality of different coloured lighting devices for the optical transmission of information, each lighting device having at least one lighting element; and

a sensor casing including a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk, particularly in the case of simultaneously active lighting elements;

wherein optical interfaces subdivide the transparent casing part into segments in which the lighting elements are received;

wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range; and

wherein the transparent casing part is constructed for use in motor vehicles as part of at least one of a hand brake lever, a gear shift lever, a windscreen wiper lever, a direction indicator lever, a control button of an air conditioning system, a mirror adjustment button, a window regulator button or a sliding roof button.

55. A device for optically transmitting information, the device comprising:

a plurality of different coloured lighting devices, each lighting device having at least one lighting element; and

a sensor casing that includes a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk when two or more lighting elements are simultaneously active;

wherein the transparent casing part includes optical interfaces that subdivide the transparent casing part into segments in which the lighting elements are received; and

wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range.